

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
AUSTIN DIVISION

Dynamic 3D Geosolutions LLC

Plaintiff,

V.

Schlumberger Limited (Schlumberger N.V.); Schlumberger Holdings Corporation; and Schlumberger Technology Corporation

Defendants.

Case No. 1:14-cv-00112—LY

JURY TRIAL DEMANDED

DEFENDANTS' MOTION TO DISMISS COMPLAINT

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Plaintiff Dynamic 3D Geosolutions LLC sued Defendants Schlumberger Limited (Schlumberger N.V.), Schlumberger Holdings Corporation, and Schlumberger Technology Corporation (collectively, “Schlumberger”) alleging infringement of U.S. Patent No. 7,986,319 (the “’319” patent). Schlumberger respectfully requests that the Court dismiss the Complaint with prejudice pursuant to Federal Rule of Civil Procedure 12(b)(6) because the ’319 patent is invalid for failing to claim patent-eligible subject matter under 35 U.S.C. § 101.¹

I. INTRODUCTION

The Supreme Court has warned time and again that, under § 101, “abstract ideas” and “mental processes” may not be removed from the public domain and owned as private property. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1293, 1301 (2012); *Bilski*, 130 S. Ct. at 3226. Such fundamental concepts are “‘part of the storehouse of knowledge ... free to all ... and reserved exclusively to none.’” *Bilski*, 130 S. Ct. at 3225 (citation omitted); *see Mayo*, 132 S. Ct. at 1301. And that principle cannot be circumvented merely by expressing an idea as a series of routine steps, embellishing it with inconsequential activity, limiting it to a particular technological environment, or implementing it on a general-purpose computer. *Mayo*, 132 S. Ct. at 1294; *Bilski*, 130 S. Ct. at 3230.

The ’319 patent is directed to a classic abstract idea – the concept of three-dimensional interpretation of two-dimensional data. That ancient concept has been applied in many different fields, from chemistry to anatomy to geology, and can – and has long been – performed in the

¹ Section 101 is a “threshold” issue, *Bilski v. Kappos*, 130 S. Ct. 3218, 3225 (2010), and properly considered on a motion to dismiss. *Lumen View Tech. LLC v. Findthebest.com, Inc.*, No. 13-cv-3599-DLC, 2013 WL 6164341, at *14-15 (S.D.N.Y. Nov. 22, 2013). Here, it is only one of several grounds on which the ’319 patent should be invalidated. For example, even without discovery, Schlumberger has uncovered evidence demonstrating that the inventors placed the claimed subject matter “on sale” in Austin, Texas more than one year before filing their patent application. 35 U.S.C. § 102(b). The inventors offered their software for sale under the marks, “Recon™” and “Cascade Technology™,” which appear in Figures 6 and 12 of the ’319 patent.

human mind or with isometric drawings, cardboard dioramas or wooden blocks. Under well-established Supreme Court and Federal Circuit precedent, that abstract idea does not become patent-eligible merely by breaking it into a series of steps or implementing it using a “general purpose computing device,” (Ex. A (’319 patent) at 8:61-62) – without disclosing any new hardware or specialized programming or specific algorithms.

In short, using a computer to perform an otherwise unpatentable idea may make conducting that idea more efficient – i.e., enabling the user to generate the three-dimensional interpretations more efficiently or “automatically” – but it is insufficient to make them patent-eligible. Nor are they made patent-eligible by the addition of insignificant post-solution activities, such as presenting, updating, querying, filtering and displaying, all of which are routine steps that are performed on data stored either in paper form or in computer memory. But that is precisely what the ’319 patent claims, and why its claims are patent ineligible and invalid.

II. STATEMENT OF FACTS

A. The Parties

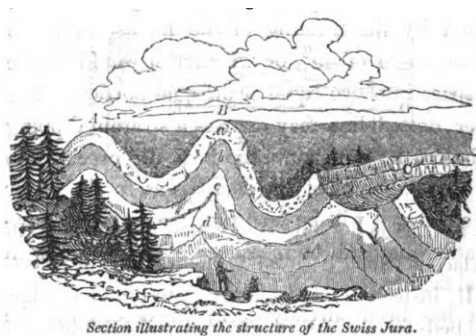
Plaintiff Dynamic 3D Geosolutions LLC (“Dynamic Geo”) is a portfolio company of Acacia Research Group LLC (“Acacia”), a patent licensing and enforcement company. Acacia acquired the ’319 patent from Austin Geomodeling, Inc. on November 18, 2013. Dynamic Geo was formed on December 6, 2013 and acquired the ’319 patent from Acacia on December 9, 2013. The ’319 patent and a pending continuation are Dynamic Geo’s only assets. On February 4, 2014, Dynamic Geo brought the current lawsuit and a parallel suit against Halliburton. *See Dynamic 3D Geosolutions LLC v. Halliburton Co.*, No. 1:14-cv-00111-LY (W.D. Tex.).

Schlumberger has been a leader in the exploration and production (E&P) business for more than 80 years. It is a global supplier of technology, integrated project management and

information solutions to customers in the oil and gas industry; it spends approximately \$1 billion per year to research and develop new technologies. It has principal offices in Houston, Paris and The Hague, and a network of 125 research and engineering technology centers worldwide. The Complaint alleges that Schlumberger's Petrel E&P Software Platform infringes the '319 patent. Schlumberger acquired the Petrel software from a Norwegian company, Technoguide, in 2002. Petrel is a Microsoft Windows-based software application for 3D visualization, 3D mapping and 3D reservoir modeling.

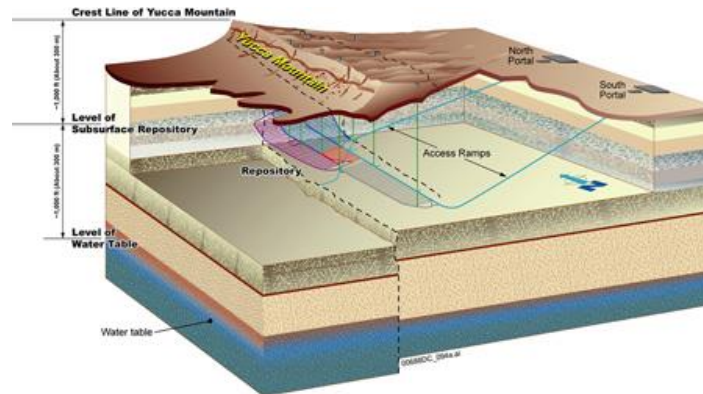
B. Technological Background

Three-dimensional graphical presentation of two-dimensional geological data dates back at least as early as the first half of the nineteenth century. Charles Lyell's *Elements of Geology*, published in 1838, contains three-dimensional graphical presentations of geological formations. Another early example is the three-dimensional wooden models of geological formations built by geologist and woodworker, Thomas Sopwith, in 1841. An example of each is reproduced below:



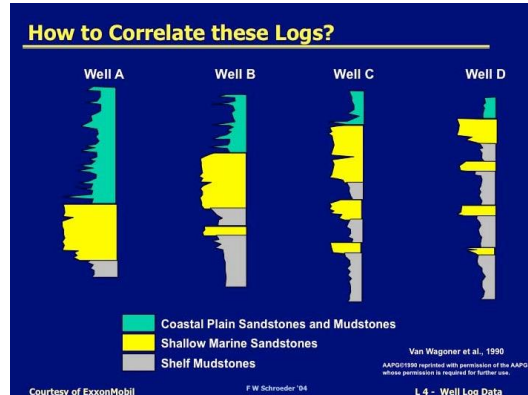
Charles Lyell, *Elements of Geology* 110 (1838), available at <https://archive.org/details/elementsgeology06lyelgoog> (last visited Mar. 28, 2014); U.K. Natural History Museum, *Item of the Month (March 2014) A Model Career: Thomas Sopwith (1803-1879)*, <http://www.nhm.ac.uk/natureplus/community/library/blog/2014/03/12/item-of-the-month-2014-a-model-career-thomas-sopwith-1803-1879> (last visited Mar. 28, 2014) (Model V – Showing Dislocations of Coal Strata)

A more modern example that still predates the '319 patent by several years is the following isometric view of the nuclear waste storage site in Yucca Mountain, Nevada, published in 2002:



Shani Walls, *Yucca Mountain All but Scrapped*, <http://www.tunneltalk.com/Yucca-Mountain-May02-Waste-management-at-Yucca-Mountain.php> (last visited Mar. 28, 2014)

Long before computers, geologists created three-dimensional interpretations of two-dimensional geological data, such as well log data and seismic data. A well log is generated during the drilling process and provides measurements of a specific parameter, such as porosity, as a function of depth in the well. By reviewing well logs side-by-side, the geologist can correlate data corresponding to different parts of the same geological feature, as illustrated below:



Am. Ass'n of Petroleum Geologists, *Well Log Data*, https://appex.aapg.org/slide_resources/schroeder/4/index.cfm (last visited Mar. 28, 2014)

Seismic data is generated by transmitting an acoustical signal into the earth's surface and then detecting and analyzing a signal that reflects the geological features at or beneath the surface. See, e.g., U.S. Geological Survey, *WHSC Seismic Profiling Systems*, <https://woodshole.er.usgs.gov/operations/sfmapping/seismic.htm> (last visited Mar. 28, 2014). A combination of well log data and seismic data can be used by geologists and geophysicists to

interpret the structure of the Earth's subsurface in a particular area.

Traditionally, geologists produced three-dimensional interpretations of two-dimensional geological data manually using pen and paper, rather than with a computer. As acknowledged in the '319 patent, well log data and seismic data were used to generate paper maps, cross-sections and three-dimensional visualizations. Ex. A at 1:15-32, 2:26-32. A collection of these maps and drawings provides a set of graphical data that can be used to visualize, present and interpret the geological environment of a geological region. *Id.* The process of presenting three-dimensional interpretations of two-dimensional data was made more efficient by the introduction of geological modeling software. *Id.* at 1:21-22 (acknowledging "current three-dimensional modeling applications").

At the time the '319 patent was filed, there were numerous commercially-available software programs that enabled the three-dimensional interpretation of two-dimensional geological data, such as Schlumberger's Petrel and Eclipse products; Halliburton's Stratamodel, Powermodel, SeisWorks, OpenWorks, PetroWorks, GeoProbe, VIP and Nexus products (formerly owned by Landmark Graphics); Roxar's IRAP RMS product (now owned by Emerson Process Management); and Paradigm's GoCAD, Geolog and VoxelGEO products. *Id.* at Fig. 3, 6:11-12, 6:43-50, 8:25, 8:46-49, 8:54-55, 12:8-9, 12:20-27, 19:45. And, as the '319 patent concedes, at least some of these programs were capable of "three-dimensional visualizations of seismic information," *id.* at 12:6-7, or "interpretation-dependent three-dimensional modeling tasks," which can be "off-load[ed]" to the disclosed system, *id.* at 20:25-28.

C. The '319 Patent

The '319 patent was filed August 1, 2007 and issued July 26, 2011, and is entitled "Method and System for Dynamic, Three-Dimensional Geological Interpretation and Modeling."

Ex. A. According to the abstract, the patent discloses “[t]echniques and a system for performing geological interpretation operations in support of energy resources exploration and production” including “present[ing] manipulable three-dimensional geological interpretations of two-dimensional geological data relating to the predetermined geological region.” *Id.*

The ’319 patent does not purport to be the first to use a computer to speed up the process of three-dimensional geological interpretation of two-dimensional geological data. *Id.* at 1:15-17, 1:52-2:18, 2:33-41, 6:33-36. For example, the ’319 acknowledges “[k]nown well log correlation software tools,” *id.* at 1:15, “three-dimensional visualization” systems, 1:27-28, and “traditional interpretation application suites,” *id.* at 2:33. According to the ’319 patent, the problem is that there are separate application programs for each aspect of the geologic interpretation process: “[c]urrently, geoscientists have to use separate applications for well-log correlation, surface modeling, and mapping, and for three-dimensional modeling and visualization.” *Id.* at 1:46-49. The ’319 patent purports to solve this problem and speed up the geologic interpretation process even further by providing an “integrated three-dimensional geological interpretation environment,” *id.* at 3:1-2, that transfers and/or combines the functionality of multiple existing applications into a single application, *id.* at 6:26-31, 6:38-42, 6:62-66, and interfaces and operates synergistically with “industry-standard” and “best-of-class” third party data management and three-dimensional modelling tools, *id.* at 6:11-12, 6:43-51, 8:22-29, 8:46-59, 12:1-13, 12:18-27. According to the ’319 patent, the main advantage of an integrated system is that a user’s changes to the interpretation are “immediately updated in the three-dimensional, cross-sectional and base map views,” *id.* at 6:19-21, thus further speeding up the process. *Id.* at 6:25-27, 6:37-38, 6:52-55, 11:7-16, 11:42-44, 11:55-56, 14:53-58.

The ’319 patent advises that the integrated system could be implemented on any “general

purpose computing device,” but does not describe any specialized, much less new or improved, hardware or software for doing so. *Id.* at 8:61-62. To the contrary, the specification admits that the hardware components are “common” and “well known in the art” – available from “leading laptop vendors.” *Id.* at 10:25, 10:67, 11:5-6. And the specification makes only vague references to the basic software components, such as a “computer readable instructions, data structures, program modules, or other data.” *Id.* at 9:14-16. It does not purport to explain what programming would be necessary to combine the admittedly “pre-existing” “industry-standard” software packages into a single program that would make the process of presenting a three-dimensional interpretation more efficient and provide automatic updating. *Id.* at 8:24, 12:3.

Indeed, the specification is entirely aspirational and reads more like a marketing brochure² – lauding the system’s ability to “deliver” superior “performance” and smooth “integration” with existing systems, resulting in a “dramatic” “effect on user workflow speed” and “translat[ing] into higher quality interpretations, lower risk, and improved success.” *Id.* at 6:8-15; *see also, e.g., id.* at 6:21-24 (“dramatically speeding the geological interpretation workflow”); *id.* at 6:59-62 (enabling “better business decisions”); *id.* at 14:38-39 (touting “vivid multi-colored, 3-D contour maps”); *id.* at 7:4-7, 7:40-43. Reading the ’319 patent as a whole, it is unclear what, if anything, the patent contributes to the art of three-dimensional interpretation of two-dimensional geological data. For example, as to the assertedly “valuable and novel” automatic updating feature, *id.* at 12:55, the specification provides no detail regarding how to program a computer to achieve that objective and instead merely teaches the self-evident steps of determining what needs to be updated and then “updating.” *Id.* at 12:49-14:17, Figs. 6-11.

² In fact, significant portions of the patent application, including the text at 1:62-2:7, 7:55-8:59, 18:11-53, 18:61-19:26, 19:44-20:24 and most of Figures 1, 6, 12, 13, 14 (misabeled Figure 4), 31, 58, 59, 62, 63, 81, 83 and 86 were lifted from marketing materials that were publicly available before the priority date of the ’319 patent.

The claims are no more specific. The '319 patent has two independent claims, 1 and 49, and a total of 93 claims. All of the claims are “for performing geological interpretation operations in support of energy resources exploration and production.” *Id.* cl. 1, 49 (preambles). Claim 1 is directed to a system comprising a storage medium and a processor for executing a set of eight method steps: (1) “generating” graphical data” by “performing well log correlation operations,” (2) “interpreting the geological environment” from surface and fault data, (3) permitting users to query and filter the data set, (4) “presenting manipulable three-dimensional geological interpretations of two-dimensional geological data,” (5) displaying base map features, (6) “automatically updating said manipulable three-dimensional geological interpretations,” (7) “creating three-dimensional well log and seismic interpretations of geological data,” and (8) “presenting time-related visualizations of production volumes.” Claim 49 is directed to a method for performing the same eight steps (except the seventh step is “calculating” instead of “creating”). Dependent claims 2-48 and 50-93 recite additional steps—for example, using basic computer functionality, gathering data, visualizing data in certain ways, or interacting with existing third-party software. The patent does not assert that such steps are anything other than routine activity, and instead teaches that they were well known.

III. LEGAL STANDARDS

A. Motion To Dismiss

Whether a claim recites patentable subject matter is a question of law. *See, e.g., Accenture Global Servs. v. Guidewire Software, Inc.*, 728 F.3d 1336, 1340-41 (Fed. Cir. 2013); *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1333 (Fed. Cir. 2012). As such, the issue may be resolved on a motion to dismiss. Fed. R. Civ. P. 12(b)(6); *see, e.g., Clear with Computers, LLC v. Dick's Sporting Goods, Inc.*, No. 6:12-cv-674, 2014 WL 923280, at *1, *8 (E.D. Tex. Jan. 21,

2014); *OIP Techs., Inc. v. Amazon.com, Inc.*, No. 12-1233, 2012 WL 3985118, at *5 (N.D. Cal. Sept. 11, 2012).

B. Patent-Eligible Subject Matter

Section 101 of the Patent Act provides that “[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.” 35 U.S.C. § 101. The Supreme Court’s recent § 101 decisions reinforce two long-held and overriding legal principles that control the disposition of this motion.

First, the Supreme Court has long recognized that § 101 “contains an important implicit exception” for “laws of nature, natural phenomena, and abstract ideas.” *Mayo*, 132 S. Ct. at 1293 (quotation marks, alteration, and citations omitted); *see also Bilski*, 130 S. Ct. at 3226. Abstract ideas are not patentable, because they are ““basic tools”” in the ““storehouse of knowledge”” that are ““free to all ... and reserved exclusively to none.”” *Mayo*, 132 S. Ct. at 1293 (citations omitted); *Bilski*, 130 S. Ct. at 3225 (citation omitted). Subject matter falling within this exception is not patentable as a matter of law. *Id.*

Second, the Supreme Court’s unanimous decision in *Mayo* underscores that this principle cannot be circumvented through ““draftsman’s art,”” or by trying to dress up an abstract idea with inconsequential steps. *Mayo*, 132 S. Ct. at 1294 (quoting *Parker v. Flook*, 437 U.S. 584, 593 (1978)). A patentable application of an abstract idea must “contain other elements or a combination of elements, sometimes referred to as an ‘inventive concept,’” so as to “do significantly more than simply describe” the abstract idea. *Id.* at 1294, 1297. Simply taking an abstract idea and adding steps or structures that are “well-understood,” “conventional,” or “already in use” contributes nothing inventive. *Id.* at 1294, 1298-99; *see also Flook*, 437 U.S. at

590. For example, simply implementing an abstract principle using well-known computer components is “not a patentable application of that principle.” *Mayo*, 132 S. Ct. at 1301; *see also Flook*, 437 U.S. at 594; *Gottschalk v. Benson*, 409 U.S. 63, 64 (1972). Without meaningful limits to an abstract idea, a patent effectively preempts the idea itself and claims a monopoly over a range of inventions that the patentee never conceived, much less contributed to the state of the art. *Bilski*, 130 S. Ct. at 3231; *O’Reilly v. Morse*, 56 U.S. (15 How.) 62, 112-14 (1853). Therefore, it is settled that merely limiting the application of an abstract idea to a particular “field of use or adding token postsolution components” does not convert the idea to a patent-eligible invention. *Bilski*, 130 S. Ct. at 3231. These principles apply regardless of whether a claim is drafted as a method, system, or otherwise. *See, e.g., Flook*, 437 U.S. at 593; *Benson*, 409 U.S. at 67-68.

Several recent controlling Federal Circuit decisions, applying this precedent, have held method, system, and other claims not patent-eligible, and thus invalid. *See, e.g., Accenture*, 728 F.3d at 1345; *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1375 (Fed. Cir. 2011). The Federal Circuit has also frequently reiterated that implementing an unpatentable abstract idea on a computer, or in a computer environment, does not convert it into patent-eligible subject matter. *See, e.g., Accenture*, 728 F.3d at 1345; *Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Can.*, 687 F.3d 1266, 1280 (Fed. Cir. 2012); *Dealertrack*, 674 F.3d at 1333; *Fort Props., Inc. v. Am. Master Lease LLC*, 671 F.3d 1317, 1323 (Fed. Cir. 2012); *CyberSource*, 654 F.3d at 1375.

IV. ARGUMENT

The ’319 patent does not claim patent-eligible subject matter under 35 U.S.C. § 101. Under well-established Supreme Court and Federal Circuit precedent, the patent is directed to a quintessential abstract idea – presenting a three-dimensional interpretation of two-dimensional

data. Automating that otherwise human-performable process using nothing more than conventional computer components and adding mere field of use limitations and token post-solution activity does not make the abstract idea patent-eligible.

A. The '319 Patent Claims Are Directed To The Abstract Idea Of Presenting A Three-Dimensional Interpretation Of Two-Dimensional Data

The '319 patent claims are directed to the abstract idea of presenting a three-dimensional interpretation of two-dimensional data. *E.g.*, Ex. A at Abstract, claims 1, 49. Each of the claims includes creating, presenting and updating a manipulable three-dimensional geological interpretation of two-dimensional geological data, such as well log and seismic data. *See Dealertrack*, 674 F.3d at 1333 (examining claims in their “simplest form” to identify ““basic concept”” at issue (quoting *Bilski*, 130 S. Ct. at 3231)). But geologists have long made such three-dimensional interpretations using pencil and paper, at least as far back as 1838. *See supra* at § II.B. Taken individually or collectively, the steps of the '319 patent claims recite a process that can be performed mentally or with pen and paper. Moreover, at root, this same concept – presenting a three-dimensional interpretation of two-dimensional data – has been performed for centuries across numerous fields, from Leonardo da Vinci’s drawings and sculptures of human anatomy to James Watson and Francis Crick’s stick-and-ball model of the double helical structure of DNA. The fundamental concept of presenting a three-dimensional interpretation from two-dimensional data is a ““basic tool[]”” in the ““storehouse of knowledge”” that is ““free to all ... and reserved exclusively to none.”” *Mayo*, 132 S. Ct. at 1293 (citations omitted); *Bilski*, 130 S. Ct. at 3225 (citation omitted).

The concept of creating, presenting and updating a three-dimensional interpretation is even more abstract than the ideas underlying claims previously held invalid by the Supreme Court and the Federal Circuit. The Supreme Court has held abstract and patent-ineligible, among

other things, claims for hedging risk in the energy market, *Bilski*, 130 S. Ct. at 3226, converting numbers to binary coded decimal, *Benson*, 407 U.S. at 67-68, and computing alarm limits when performing catalytic conversion, *Flook*, 437 U.S. at 590. Similarly, the Federal Circuit has held abstract computer-based claims for generating tasks in an insurance organization, *Accenture*, 728 F.3d at 1346, managing a stable value protected life insurance policy, *Bancorp*, 687 F.3d at 1280, processing credit applications through a clearinghouse, *Dealertrack*, 674 F.3d at 1333, managing real estate investments for tax deferred exchanges, *Fort Properties*, 671 F.3d at 1323, and detecting fraud in internet credit card transactions, *CyberSource*, 654 F.3d at 1375. In each of those cases, the courts recognized that, although broken into a series of steps, the underlying ideas were nonetheless abstract concepts and mental processes. The fundamental concept at issue here is no less abstract and no more patent-eligible.

B. The '319 Patent Claims Only Add Insignificant Elements That Do Not Convert The Abstract Idea Of Presenting A Three-Dimensional Interpretation Of Two-Dimensional Data To A Patent-Eligible Application Of That Idea

As discussed, the prohibition on patenting an abstract idea cannot be circumvented simply by attempting to “limit” the idea to a particular technological environment or by adding insignificant steps – lest “patent eligibility ‘depend simply on the draftsman’s art.’” *Mayo*, 132 S. Ct. at 1294 (quoting *Flook*, 437 U.S. at 593); *see id.* at 1300 (“[S]imply appending conventional steps, specified at a high level of generality, to ... abstract ideas cannot make [them] patentable.”). Such inconsequential and cosmetic steps, the Supreme Court has repeatedly cautioned, do not change the fact that a patent is drawn to an abstract idea.

In *Mayo*, the Court held that a diagnostic method consisting of administering a drug for a class of diseases and measuring the resulting metabolite levels was not patent-eligible because the claims were nothing more than a series of “conventional,” or “well-understood” limitations

appended to an otherwise unpatentable principle (the natural correlation between patient metabolite levels and drug efficacy). *Id.* at 1294, 1298. The Court drew upon its precedents, each of which compels the same result in this case. For example, in *Bilski*, the abstract idea of hedging did not become patentable by limiting it “to use in commodities and energy markets,” or adding “‘well-known random analysis techniques.’” *Mayo*, 132 S. Ct. at 1300-01 (quoting *Bilski*, 130 S. Ct. at 3231). Likewise, in *Flook*, the abstract idea of using a formula to compute an updated alarm limit did not become patentable merely by confining it to the petrochemical field, appending the “‘well known’” “‘use of computers for ‘automatic monitoring-alarming,’”” or adding other “‘post-solution activity’ that is purely ‘conventional or obvious.’” *Id.* at 1299 (quoting *Flook*, 437 U.S. at 590, 594). And, in *Benson*, the abstract idea of converting binary coded decimal numbers to pure binary did not become patentable “simply [by] implementing [it] on a physical machine, namely a computer.” *Id.* at 1301 (discussing *Benson*). Applying these holdings, the Court held that the patent in *Mayo* was invalid because the claims appended to a natural law steps that “add nothing specific ... other than what is well-understood, routine, conventional activity, previously engaged in by those in the field.” *Id.* at 1299.

The same result follows here: the abstract three-dimensional interpretation concept does not become patentable simply by (1) limiting it to the fields of “geological interpretation” or “energy resources exploration”; (2) stating that the claims can be implemented on a “general purpose computing device” or drafting certain claims as a “system” with a “storage medium” and a “processor” for performing the method steps; or (3) adding “well-understood,” “conventional,” or “already in use” activity or “token” post-solution components. None of these limitations makes the claims “significantly more” than the abstract idea itself. *See id.* at 1294.

1. Limiting The Claims To The Fields Of Geology Or Energy Exploration Does Not Make Them Patent-Eligible

It does not matter that the claims refer to presenting three-dimensional interpretations for a specific purpose – *i.e.*, “for performing geological interpretation operations in support of energy resources exploration and production.” Ex. A, claims 1, 49 (preambles). Three-dimensional interpretations can be constructed from two-dimensional data for any number of reasons in any number of fields. Merely “limiting” the claims to using the concept in a particular field (geological energy exploration) does not render the claims patent-eligible, just as it was not enough to limit the abstract hedging principle in *Bilski* to the energy markets, 130 S. Ct. at 3230, or limit the abstract alarm updating idea in *Flook* to the petrochemical or oil refinery industry, 437 U.S. at 589-90, or limit the abstract clearinghouse concept in *Dealertrack* to auto loan applications, 674 F.3d at 1334. As the Federal Circuit explained in *Dealertrack*, the claims there were ineligible despite “cover[ing] the use of a clearinghouse only in the car loan application process, and not all uses thereof” because “[t]he notion of using a clearinghouse generally and using a clearinghouse specifically to apply for car loans, like the relationship between hedging and hedging in the energy market in [*Bilski*] is of no consequence without more.” *Id.* Likewise, here, the limitation to the geological and energy fields is a field-of-use limitation that “is of no consequence.” *Id.*

2. Appending Well-Known, General Purpose Computer Technology To The Claims Does Not Make Them Patent-Eligible

It also does not matter that the specification states that the three-dimensional interpretation idea can be implemented using any “general purpose computing device,” Ex. A at 8:61-62, or that claim 1 (and its dependent claims) are drafted as a “system” with a “storage medium” and “processor” to perform essentially the same method steps as in claim 49 (and its dependent claims). The Supreme Court has made clear that engrafting such general-purpose

computing components onto abstract ideas does not make those ideas patent-eligible. In *Mayo*, the Court specifically reaffirmed its prior holdings in *Benson* and *Flook* that implementing an unpatentable idea on a computer is “not a patentable application of that principle.” 132 S. Ct. at 1301; *see id.* at 1299. And the generic computer components recited in the ’319 patent do not meaningfully limit the claims any more than did the general purpose computers in *Benson* and *Flook*.

The Federal Circuit’s recent precedent compels the same result. For example, the claims in *Accenture* were directed to a computer system for generating tasks to be performed in an insurance organization by (1) storing information on insurance transactions in a “database,” (2) using “software” to determine what tasks need to be accomplished for that transaction, and (3) assigning the tasks to authorized individuals. 728 F.3d at 1338. The claims recited multiple software and hardware components – including a server, several databases, an “event processor,” a “task engine,” a “task assistant,” and a “client component” that “transmits and receives data.” Nevertheless, the claims were nevertheless found patent-ineligible because they were merely “generic computer components” and “generalized software components arranged to implement an abstract concept on a computer.” 728 F.3d at 1338, 1343, 1344-45.

Similarly, the claims in *Bancorp* were directed to computerized systems and methods for managing a life insurance policy including steps of (1) generating a policy, (2) calculating fees and other values, and (3) storing the policy unit value. 687 F.3d at 1270-72. The court held claims ineligible even though “[t]he[ir] plain language ... require[d] particular computing devices, such as a ‘generator,’ a ‘calculator,’ and ‘digital storage’” because appending such general components does not “salvage an otherwise patent-ineligible process.” *Id.* at 1274, 1278.

Likewise, in *Dealertrack*, the claims described a “computer-aided” method for

implementing a loan clearinghouse broken down into a series of common-sense steps: (1) “receiving data from one source,” (2) “selectively forwarding the data,” and (3) “forwarding reply data to the first source.” 674 F.3d at 1333. The court held claims ineligible even though they referred to a computer because they were “silent as to how a computer aids the method, or the significance of a computer to the performance of the method.” *Id.* The fact that a computer might act “as an obvious mechanism for permitting a solution to be achieved more quickly, *i.e.*, through the utilization of a computer for performing calculations” – was insufficient because the computer did not “impose a meaningful limit on the scope of [the] claim.” *Id.* (quotation and citation omitted). *See also Fort Props.*, 671 F.3d at 1322-24 (claims for “investment tool” not patent-eligible despite requiring “computer”); *CyberSource*, 654 F.3d at 1373-74 (claims for detecting fraud in internet credit card transactions not patent-eligible despite reciting computer components).³

In all of these cases, the computing devices did not meaningfully limit the claims because the claims either (i) did not “specify how the computer hardware and database are specially programmed to perform the steps claimed” and the computer could be programmed to perform them in different ways, *see, e.g., Dealertrack*, 674 F.3d at 1333; *Fort Props.*, 671 F.3d at 1323-24; or (ii) fundamentally did not need a computer at all, *see, e.g., CyberSource*, 654 F.3d at 1373. It is not enough that a computer, programmed in some unspecified way, might be able to do the tasks “more quickly.” *Dealertrack*, 674 F.3d at 1333 (citation omitted). Stated simply, unpatentable ideas cannot be transformed into patent-eligible inventions “by merely requiring a

³ And the list of computer-implemented claims found invalid only continues to grow. *See, e.g., Compression Tech. Solutions, LLC v. EMC Corp.*, No. 2013-1513, slip op. at 2 (Fed. Cir. Mar. 10, 2014) (unpublished); *CyberFone Sys., LLC v. CNN Interactive Grp., Inc.*, No. 2012-1673, slip op. at 7 (Fed. Cir. Feb. 26, 2014) (unpublished); *Smartgene v. Advanced Biological Labs., SA*, No. 2013-1186, slip op. at 10 (Fed. Cir. Jan. 24, 2014) (unpublished); *see also CLS Bank Int’l v. Alice Corp. Pty.*, 717 F.3d 1269, 1273 (Fed. Cir.) (en banc) (per curiam), *cert granted*, 134 S. Ct. 734 (2013).

computer to perform the method.” *CyberSource*, 654 F.3d at 1376.

Here, the computer components do not meaningfully limit the claims for both of the above reasons. First, even less than in the Federal Circuit cases discussed, the claims here do not recite or require any specialized hardware or programming. To the contrary, the specification admits that the method can be implemented on any “general purpose computing device” with components that are “well-known in the art” and available from “leading laptop vendors.” Ex. A at 8:61-62, 11:5-6. And the specification does not purport to explain what programming would be necessary to transfer and/or combine the functionality of multiple existing applications into a single application, *id.* at 6:26-31, 6:38-42, to operate synergistically with third party data management and three-dimensional modelling tools, *id.* at 6:11-12, 6:43-51, or to enable the system to “automatically” update the three-dimensional interpretations, *id.* at 8:24, 12:3. Indeed, the specification does not disclose any particular software for implementing the system and method at all – let alone “intricate and complex computer programming.” *Ultramercial, Inc. v. Hulu, LLC*, 722 F.3d 1335, 1350 (Fed. Cir. 2013), *petition for cert. filed*, 2013 WL 4495981 (Aug. 23, 2013); *see also Accenture*, 728 F.3d at 1346 (distinguishing *Ultramercial*). Reciting such generalized hardware and software components does not make patent-eligible the abstract concept of presenting a three-dimensional interpretation of two-dimensional data. *See, e.g., Benson*, 409 U.S. at 64-68; *Accenture*, 728 F.3d at 1338, 1344-45; *Bancorp*, 687 F.3d at 1274-78; *Fort Props.*, 671 F.3d at 1323-24; *Dealertrack*, 674 F.3d at 1333.

Second, the underlying concept of presenting three-dimensional interpretations of two-dimensional data can be implemented without a computer at all. All of the basic method steps (claim 49 and its dependent claims) can be, and long were, performed by a person with pencil and paper. *See supra* at 5, 11. The specification concedes as much, describing “traditional hard

copy well logs,” “updating paper cross-sections and maps,” and a “paper-based workflow.” Ex. A at 1:16, 26, 2:29-30. That fact itself conclusively establishes that the claims fundamentally do not need a computer in the first place, and thus that the references to computers do not meaningfully limit the claims. *See CyberSource*, 654 F.3d at 1373. Likewise, it is clear that the system claims (claim 1 and its dependent claims) are also not patent-eligible merely because they add “a storage medium” and “a processor” for performing the same patent-ineligible methods. In *CyberSource*, the Federal Circuit held that the human performable abstract fraud-prevention method did not become patent-eligible merely by recasting it as a “computer readable medium containing program instructions” for performing the same method because the computer did not play a significant part. *Id.* at 1373-74. The same is true here. Moreover, the purportedly “novel” aspect of the system is the ability to “automatically” update the three-dimensional interpretation. But simply using computers to perform the otherwise unpatentable abstract data-manipulation process more quickly or efficiently does not make it patent-eligible. *See Bancorp*, 687 F.3d at 1278; *Dealertrack*, 674 F.3d at 1333.

3. The Additional Limitations Are Routine Steps And Token Extra-Solution Activity That Do Not Make The Claims Patent-Eligible

The additional limitations recited in the independent and dependent claims also do not make them patent-eligible because they only append routine activity performed by those in the field or token extra-solution activity.

Apart from the purportedly novel ability to “automatically” update the three-dimensional data (which, as discussed, does not make the claims patent-eligible), the only other steps of the independent claims (claims 1 and 49) are routine for anyone in the field of geological interpretations, such as “performing well log correlation operations,” “interpreting the geological environment,” “querying” the data, displaying base map features, and creating or calculating

three-dimensional well log and seismic interpretations. Similarly, the dependent claims (claims 2-48 and 50-93) only add well-understood steps, routine data-gathering, or other token post-solution activity – including using basic computer technology (like drag and drop capability), importing or exporting data from and to certain sources, further displaying or manipulating the data, and interacting with third-party commercially available software. The patent does not, and could not, assert that any such steps are inventive and nothing in those limitations requires any specialized hardware or software. All of them are “well-understood, routine, conventional activity previously engaged in by researchers in the field” or token post-solution limitations activity that does not make the claims patent-eligible. *See, e.g., Mayo*, 132 S. Ct. at 1294, 1298-99; *Bilski*, 130 S. Ct. at 3230; *Flook*, 437 U.S. at 589-90; *Dealertrack*, 674 F.3d at 1334; *see also Fed. Home Loan Mortg. Corp. v. Graff/Ross Holdings LLP*, 893 F. Supp. 2d 28, 33 n.6, 39 (D.D.C. 2012) (invalidating 614 claims in two patents, relying on quoted language from *Mayo*).

C. The Claims Also Fail The Machine-Or-Transformation Test

The '319 patent claims also fail both prongs of the so-called “machine-or-transformation test” – which, although not the “sole test,” can be “a useful and important clue, an investigative tool, for determining whether some claimed inventions are [patentable] processes under § 101.” *Bilski*, 130 S. Ct. at 3227. First, the patent claims are not tied to “a particular machine.” It is settled that “[s]imply adding a ‘computer aided’ limitation to a claim” does not make it tied to a “particular machine.” *Dealertrack*, 674 F.3d at 1333-34. For example, in *Bancorp*, the court rejected the patentee’s argument that a computer played a significant part in the claims, concluding instead that it was “the management of the life insurance policy that is ‘integral to [the] claims at issue,’ not the computer machinery that may be used to accomplish it.” *Bancorp*, 687 F.3d at 1279. The same is true here. As discussed, the '319 patent at root does not require a

computer at all, or at most recites only generic computer devices and software concepts (*e.g.*, implementing the same method steps as a “system” with a “processor” claims 1-48). *See supra* at § IV.B.2. That is the type of incidental use of a machine that the Federal Circuit has repeatedly found wanting. *See, e.g., CyberSource*, 654 F.3d at 1373, 1375; *Dealertrack*, 674 F.3d at 1333-34; *see also Clear with Computers*, 2014 WL 923280, at *6 (using “a general purpose computer to perform [an] abstract idea ... is not sufficient to satisfy the machine prong” (citing *Bancorp*, 687 F.3d at 1273, 1278)).

Second, the claims do not “transform[] a particular article into a different state or thing.” *CyberSource*, 654 F.3d at 1369 (quotation and citation omitted). As the Federal Circuit has held, “[t]he mere manipulation or reorganization of data. . .does not satisfy the transformation prong.” *Id.* at 1375; *see also Bancorp*, 687 F.3d at 1273 (claim failed transformation prong because it did “not transform the raw data into anything other than more data” (quotation and citation omitted)); *Clear with Computers*, 2014 WL 923280, at *6 (quoting *Bancorp*, 687 F.3d at 1273). The claims here, which are directed only to such data manipulation, do not involve a qualifying transformation.

The fact that the patent claims fail the machine-or-transformation test is itself compelling evidence that the ’319 patent is invalid. Regardless, even if the test were satisfied, the claims would still not be patent-eligible because the machine-or-transformation test does not “trump[]” the abstraction analysis. *Mayo*, 132 S. Ct. at 1303.

V. CONCLUSION

Because the ’319 patent claims are invalid for failure to claim patent-eligible subject matter under 35 U.S.C. § 101, Schlumberger respectfully requests that the Court grant its motion to dismiss the Complaint.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that, on March 31, 2014, I electronically filed the foregoing with the Clerk of the Court using the CM/ECF system, which will send notification of such filing to the following:

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